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# BAY AREA ATARI\* USERS GROUP

## NEWSLETTER

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September 1981

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### BBS WORLD

I recently fell through my ATARI into a whole new world, that of telecommunications. Personally, that has come to mean BBSing. BBSing (yes I meant to add that extra B) comes from the term Bulletin Board System and involves posting and reading messages from electronic bulletin boards, most of which are completely free.

In my free local calling area, there are at least three systems available. They allow sending both private and public messages to anyone who us a user of the system. They are CBBS, 737-7543, CE-NETWORKS @ 227-5416, and the Bullet-80 system @ 241-0769 (all with a 408 area code). There are many more located all over the country and the world, but these are my free ones in ma Bell's rate structure. They offer electronic mail and program download to the user. We should soon have many of our programs available on them soon.

Two systems that are much larger are the SOURCE and COMPUSERVE/MICRONET. These are both large computer based systems which are entered through a local call, and have computer nodes spread around the country. They offer services such as sports news, AP news wire, stock market reports, games, higher languages for your computer, etc. One of the most interesting and popular services of Cserve is the

Citizens Band simulation. This allows on line communication in real time with many people at once. (I've seen as many as 19 people on one channel talking back and forth at once.) You can even hold secret conferences as the system allows a 6 letter/digit scramble code. When this is used your messages are gibberish to anyone who isn't using the same code.

Compuserve and the Source both charge you for the time you are logged onto the system. Cserve charges \$5/hour during non-prime time, from 6PM-7AM, and the low rate time for the SOURCE, goes for \$2.75 between 1AM and 6AM. There is another, intermediate, rate for the SOURCE from about 6PM, which is:

a little higher than the Cserve rate but I don't know exactly what it is. The Source charges an initial fee for set up of \$100. The Source was bought by READERS DIGEST no too long ago, so someone up there thinks telecommunication has a good future!!

There are many useful things you can do when you are equipped to send and receive messages and data with your ATARI not the least of which is send in articles for the newsletter over the telephone. Try it, you'll like it!

WARNING, WARNING, WARNING, WARNING,  
THIS ACTIVITY MAY BE HABIT FORMING AND  
ALMOST IMPOSSIBLE TO STOP, STOP, STOP  
STOP, STOP, STOP, SIGHHHH!!!!!!

DAVE FLORY



# BAY AREA ATARI USERS GROUP NEWSLETTER

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All articles are written and donated by readers. Opinions expressed in this publications are those of the individual author and do not necessarily represent or reflect the opinions of the Bay Area Atari Users Group as a whole or of any other commercial or non-commercial organization.

Please submit articles carmera ready, typed or printed in ~~3~~ 3 1/2" columns. Mail to "EDITOR" at the correspondence address.

Subscriptions (which include Group membership) are \$12 per year and entitle you to 12 newsletters. Single newsletters are \$1.

## PROBLEM HOTLINE

| EVENING   | CONTACT        | PHONE NUMBER   | SPECIALITY    |
|-----------|----------------|----------------|---------------|
| Monday    | Robin Ziegler  | (408) 438-6879 | Graphics      |
| Tuesday   | Chris McAfee   | (408) 258-8442 | Hardware      |
| Wednesday | John Crane     | (408) 268-7317 | BASIC & Forth |
| Thursday  | Paul Conrad    | (408) 226-7676 | BASIC         |
| Friday    | Skip Inskeep   | (408) 251-5517 | Forth         |
| Saturday  | Bob Burkhalter | (415) 856-1893 | Disc I/O      |
| Sunday    | Hans Hansen    | (415) 490-0175 | DOS I & II    |

Please Restrict your calls to between the hours of 7:00 to 9:00 p.m. on the day the contact is on duty. This is experimental and subject to change or cancelation. If you have any questions about the operations, call either the assigned contact or Mark Spencer at (415) 965-9355.



```

0 REM MODEM/DISK PROGRAM
1 REM by Larry Hitz 2/1/81
2 REM Clarendon Hills, Ill.
3 REM Modified by Richard Hiatt
4 REM San Diego, CA.
10 TRAP 2000
12 DIM A$(1),FILE$(15),F$(12)
14 FILE$="D:"
20 GOSUB 5000
30 Y=ADR(A$)+20:X=1:FULL=FRE(0)-100
35 OPEN #1,4,0,"K:":OPEN #2,13,0,"R:"
45 XIO 40,#2,0,0,"R:"
50 STATUS #2,Z:IF PEEK(747) THEN GET #2,N:IF N>31 THEN ? CHR$(N);:POKE Y+X,N:X=X+1:GOTO 50
55 IF PEEK(764)<>255 THEN GET #1,N:PUT #2,N:GOTO 50
60 IF PEEK(53279)=3 OR X>FULL THEN 1100
70 IF PEEK(53279)=6 THEN ? :? "START":X=1
100 GOTO 50
1100 CLOSE #2:CLOSE #1
1150 ? :? "SAVING MESSAGES TO DISK"
1200 TRAP 1250:OPEN #4,9,0,FILE$:GOTO 1300
1250 TRAP 1275:CLOSE #4:OPEN #4,8,0,FILE$:GOTO 1300
1275 CLOSE #4: ? :? "UNABLE TO SAVE MESSAGES": ? :? "PLEASE CHECK DRIVE 1?"
1277 ? "TRY ANOTHER FORMATTED DISK?"
1280 ? "HIT <RETURN> TO TRY AGAIN!"
1290 OPEN #1,4,0,"K:":GET #1,Z:CLOSE #1:GOTO 1150
1300 FOR T=1 TO X-1:N=PEEK(Y+T):PUT #4,N:NEXT T:CLOSE #4:X=1
1400 ? :? "RETURNING TO MODEM ":GOTO 35
2000 ? ">850 INTERFACE NOT BOOTED...":END
5000 ? ">":POKE 752,1
5100 ? "Be sure you have a disk in DRIVE 1."
5200 ? "To start saving text into memory"
5210 ? "hit <START>. Each time START is"
5220 ? "pressed, memory is CLEARED."
5300 ? "To save memory to disk "
5310 ? "Hit <OPTION>. Program automatically"
5320 ? "appends to a current file or it will"
5330 ? "create a new file then memory"
5332 ? "is cleared."
5350 ? :? "Program saves memory automatically"
5360 ? "when FULL without pressing OPTION"
5370 ? "then returns to MODEM."
5400 ? :? "Hit <RETURN> to continue.":INPUT F$
6000 ? ">": ? :? "What is text file name? Default"
6010 ? "file is <MODEM.TXT>."
6015 ? :? " " " :INPUT F$:REM SPACE BETWEEN QUOTES IS LINE OF REVERSE V
IDEO
6020 IF LEN(F$)=0 THEN F$="MODEM.TXT"
6030 ? :? "The saved text filename is"
6040 ? "<"F$";>."
6050 FILE$(3)=F$
6060 ? "MODEM IS NOW RUNNING FULL DUPLEX"
7000 POKE 752,0:RETURN

```



## TELECOMMUNICATIONS

Remember that famous line out of the old classic COLLEEN IN WONDERLAND? "The time has come, the walrus said, to talk of many REMs, of Babbages and modems and ways to access nets." Well the time has indeed come. I have been intending to write this article for several months now. A telecommunications explosion is about to take place and the sooner you get in on the action, the more you will profit by it.

I will assume that since you are reading this newsletter you already own an ATARI computer. To get into telecommunications you will need to purchase a modem. There are basically two types: 1) Direct connect (very expensive) that plugs directly into your phone jack, and 2) Acoustically coupled (not cheap). The ATARI modem is of the acoustically coupled type; the telephone handpiece sits in a cradle consisting of two rubber "muffs" that hold and acoustically insulate the microphone and receiver. The ATARI modem is essentially a CAT Novation modem with the ATARI logo on it. The CAT modem can usually be purchased more cheaply through mail-order than the ATARI but be advised that the CAT comes without the RS232 cable for interconnecting the modem and the required ATARI Interface Module. The cables tend to be relatively expensive, usually about \$40.

You will also need some software to allow you to communicate with other computers. If you have more money than time, I might suggest you go buy the Telelink I cartridge and hope they come out with a Telelink II very soon.

Don't hold your breath though! The Telelink cartridge is easy to use and trouble free. It however, does not allow you to save anything to disk and it is frustrating to wait while the computer flushes memory to the printer. It can also be expensive if you are paying for the "main frame" connect time. You have perhaps three

other choices: 1) you, or a knowledgeable friend, can disassemble the code in the cartridge ROM and modify it so that it dumps the output directly to the disk, 2) buy any of a number of commercially available disk based programs such as "Downloader", or 3) type in the program included with this article. It was printed in the San Diego ATARI Users Group newsletter and is about as good as any I know of in the public domain.

Now you might reasonably ask "why should I spend \$220 for an Interface Module, \$200 for a modem and \$25 for terminal emulator software?" The reason is that it expands the power of your computer. It allows you to communicate with other, larger computers. It allows you access to information in the form of huge data bases (see the accompanying article about DIALOG). It allows you to "talk" with other computer owners and exchange anything of mutual interest.

Two other large commercial information services are THE SOURCE and COMPUSERVE. ATARI currently has a special news column on COMPUSERVE called Discovery. I understand that they also have plans to allow mail-order of ATARI Program Exchange (APX) products in the very near future from COMPUSERVE. It costs \$5/hour for connect time to use COMPUSERVE. IBS Telemail (see BYTE magazine) charges \$3.50/hour. THE SOURCE has a moderate hourly rate but unfortunately has a \$100 initiation fee!

What I find the most useful are the local free Bulletin Boards and Conference Trees. They usually are run with dedicated Apple computers and are very easy to use. They have instructions and usually HELP commands built in. They are nationwide and so numerous that the last time I requested a list from the Palo Alto Peoples Message System (415-493-7691),



## DOWNLOADER

Downloader is a "smart terminal" program distributed by Computer Age Software of Silver Springs, Maryland. Using Downloader, one can logon to information utilities like CompuServe, download data into memory, save data from memory to disk or to print offline, load data from floppy disk or cassette into memory and then upload from memory to another computer.

To use Downloader, it must be loaded from a floppy disk (the documentation indicates that a cassette version is also available) and RUN it. A title page appears on the screen. The option button is then pressed and a menu is presented with the following selections:

- Parity
- Stop Bits
- Word Size
- Local Copy
- Memory
- Quit
- Send Arbitrary Character

Selecting memory allows one to enter the memory sub menu which presents one with the following choices:

- Modem to Memory
- Clear Memory
- Save
- Load

The amount of memory available is also indicated (23K available for a 48K system). When the Modem to Memory switch is set to true, incoming data is entered into memory. When this switch is set to false, incoming data is not entered. Selecting Save allows one to save memory contents to disk or to list the memory contents to screen or print the memory contents. The ability to print offline is a major connect time saver when printing data from an information utility compared to using Telelink. Selecting Load allows one to load information from a disk file into memory for uploading.

Downloader is generally user friendly. The only problem I have had using Downloader has been when I've made mistakes in memory operations. If a mistake is made in a Save

command, correctly re-entering the command will not save the memory contents. Downloader has to be reRun in order for a Load or Save command to be executed which causes the memory contents to be lost.

Downloader for the user of Atari disk system represents a major improvement over the Telelink cartridge. It is competitively priced (\$19.95) and provides a great deal of communication power for the price. For my communications applications, I would like a "smart terminal" package with a few more features such as automatic saving to disk when the memory becomes full, constant indication of memory remaining, and built-in text editing capability for generating message files for uploading. However, Downloader satisfies 95% of my needs and for a reasonable price.

Robert Kawaratani

### ADVERTIZING POLICY

Short ads (3 to 5 lines) will be run FREE for INDIVIDUALS with PAID memberships.

Commercial Ads will run upon receipt of camera-ready copy and payment according to the fee schedule below:

|                          |         |
|--------------------------|---------|
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| Quarter page or less     | \$12.50 |

Copy deadline -the 7th of each month  
Mail to: Newsletter Ads  
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-FOR SALE-

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board - \$50  
Scott 651-5238 eves.

Call this  
W night?

There isn't room to slip an editorial in here edgewisely... catch ya' next month. Oh, by the by, could I interest anyone in acting as guest editor for a spell? Call me. Liza Loop



## MACHINE LANGUAGE #3

In preparing to use a machine language you must know several things about how that language functions. I have a favorite saying that you can not 'approximately' program a computer but you must do it exactly and correctly.

Well, perhaps the first thing you must do, after you buy a reference guide, is to review the list of various instructions that are available. This is what is called the 'Instruction Set'. It will contain instructions to perform arithmetic, move data in and out of memory or registers, perform tests of conditions, and a variety of other tasks. As computers go, the 6502 has a fairly small instruction set and one of easiest to understand.

Besides learning the function of each instruction, there are two other vital pieces of information you will be needing. One of these is the effect of the instruction upon the bits in the flag register, or FLAGS. The second is a listing of the various addressing modes which are available for the instruction. The address modes will be covered more thoroughly in a later article.

There are seven flags contained in the flag byte and one unused position. There are three flags that you usually don't have much to do with. They are the 'B' Break flag, 'D' Decimal mode on flag, and the 'I' interrupt mask flag. The other four flags are of more interest, especially when talking about doing machine language routines for a BASIC program. They are the 'N' Sign (Negative) flag, the 'V' Overflow flag, the 'Z' zero flag, and the 'C' Carry flag.

The 'N' flag is used to indicate that a storage position or register that was tested contained a value that had the high order position bit set to one. This could be either a negative value or some positive value greater than 127. The way you intended as the programmer to use the position will determine which. The 'V' overflow bit tells you that you have had an overflow into the sign bit from an arithmetic operation and the result may have suddenly turned negative, (or positive), and that should be handled. The 'Z' zero flag is set when the result of a mathematical operation is zero or a storage position is loaded and contained a zero.

The carry flag is used in mathematical operations to show carries from one byte to the next. This is necessary because the values which a single position can hold are usually not big enough for your math needs. Before add and subtract operations the carry must be set properly.

Two pieces of data about the flags should be known. First, what sets the flags, and secondly, how do you use them? The 'C', 'D', & 'I' flags may be set and cleared with various SET or CLEAR instructions. The other flags, as well as the 'C' flag, are set by various operations. The charts in your machine language reference book will show you which instructions set which flags. The most important thing is to remember that the flags stay set until they are reset by another operation.

During the period they are set you may use them by issuing the various branch instructions. These test the flags and change program sequence based upon the results.

As an example, when you issue a load instruction to accumulator or register, the 'N' (sign) and 'Z' (Zero) flags are set to show you whether the loaded value was negative, (had the high order bit set on), or was zero. Follow the load with a BEQ (Branch Equal to Zero), to handle zero values or with a 'BMI' (Branch Minus) to handle negatives. Remember that executing the various branch instructions will not change the values of the flags.

In general, the flags are not difficult to learn and yet are very powerful as well as handy when used properly. Learn how to read the tables or pictorials about the flags in your 6502 guide and you'll think of ways to let the flags save you some work.

Paul Conrad

### MI<sup>2</sup> Acoustic Coupler

Originate-Answer, Half-Full Duplex, and DAA/Auto-Answer Jack. All for only \$75. John Powers at 946-6999.



several months ago, I got three pages of phone numbers! I haven't asked since. Several months ago Popular Electronics magazine published a list of 250 computerized Bulletin Boards that it obtained from the Novation, Inc. Bulletin Board catalog. If you wish an updated list call 213-881-6880; when the LOGON PLEASE message appears, type CAT (ret).

Mark Spencer

\*

Msg# 5345 on 07/05/81 @20:32 (5)  
Subj: cbbs sunnyvale, To: all  
From: interactive bus, sunnyvale, ca

in case you were unaware, cbbs santa clara which was at 408-241-1956 is now cbbs sunnyvale, ca at 408-737-7543. if you have been unable to reach us, this may explain it! why not give us a call and see what is new since the last time you have been on our system?

End msg #5345

Msg# 5346 on 07/05/81 @20:35 (16)  
Subj: global telecommunications, To: all  
From: interactive bus, sunnyvale, ca

are you interested in communicating with other computer and non-computer folk all around the country and even the globe perhaps you might be interested in the TELEMAL/IBS system. If you like CBBS/PMS/ABBS systems you feel right at home with the TELEMAL Electronic Communication System. The system features over 20 bulletin boards currently, with new ones added whenever there is additional interest. If you have a group or club you might even be able to get a private board created just for your own use (no extra charge.) the system is multi-user and runs on a large multi-processor computer system so there never is any busy signal. for more information leave a msg on cbbs sunnyvale for mike dove admin/ibs or call: interactive business solutions  
333 cobalt way, suite 106  
Sunnyvale, CA 94086 408-737-9618

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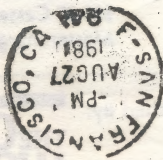
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# NEW MEETING PLACE -- SEPTEMBER 1

The Cambell Community Center, at the corner of Winchester Blvd. and Cambell Ave. will be our location this fall. Find us in Room 10 H, the old high school cafeteria, at 7:30.

Our speaker will be Paul Laughton, one of the developers of both Shepardson BASIC and the File Manager.

## NEW LOCATION NEEDED FOR QUESTION AND ANSWER SESSION!

We are sad to here that Interim Electronics can no longer host our mid-month meetings. We all appreciate the hospitality Interim has shown us over the last year.

Who knows of a place we can gather in the future? Please contact Mark Spencer (415-965-9355) or Hans Hansen (415 490-0175) or Dave Flory (408 244-7181) with any leads. If we haven't found a meeting room by Sept. 1, we might have to skip the Sept Q&A.